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ABSTRACT

This paper discusses the importance of an analytic planning model to academic libraries in the context of campus-wide planning and briefly describes two projects funded through the Council for the Advancement of Small Colleges (CASC) to develop appropriate management products. The first project focused on the development and testing of analytic planning models capable of being replicated at other colleges: the second developed and tested a series of management information systems to provide the data for an analytic planning cycle, as well as other planning and data services. These projects resulted in the implementation of an analytic planning model on the campuses of most of the 15 participating colleges, and the generation of nine management modules (or data systems) capable of providing inter-institutional data for comparative purposes. These modules, which are available to interested colleges from CASC, cover library costs and services, personnel and compensation, instructional program, faculty activity, college goals and climate, student recruitment, student attrition, student financial aid, and fund raising. An outline of characteristics common to many analytic data systems and a description of the library-oriented module are included. (RAA)

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THE ECOLOGY OF THE ACADEMIC LIBRARY:

ARTICULATING LIBRARY NEEDS TO THE COLLEGE PLANNING PROCESS:

A model

by

Willis M. Hubbard

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THE ECOLOGY OF THE ACADEMIC LIBRARY: ARTICULATING LIBRARY NEEDS TO THE COLLEGE PLANNING PROCESS
-A Model-

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Perhaps I should take a few moments to explain the word "ecology" in my title. *Webster's Third New International Dictionary* defines ecology as "the totality or pattern of relations between organisms and their environment." In our discussion today, the academic library is the organism and the college or university is the environment in which the library must compete and survive.

Perhaps I should also explain how I gained my experience with college planning models. This experience began in 1972 as a result of a three-year, $900,000 U.S. Office of Education grant to the Council for the Advancement of Small Colleges, more commonly known as CASC. CASC is an association of around 160 private colleges. This association chose my own college (Eureka College) as one of 15 member colleges to participate in this three-year grant. The purpose of this project was to develop and test campus-wide analytic planning models which could be replicated at other colleges across the country.

The rationale for the grant was that as times became more troubled for higher education, we realized that our techniques for institutional planning and budgeting were not adequate. Colleges needed an improvement over their way of fiscally wandering from one academic year to another. I'm sure each of us has had personal experience with our college or university's inability to plan and budget even next year's programs.

Under this grant I assumed a half-time position as the assistant to the college president with responsibilities for institutional research and planning and for developing the entire college's annual operating budget. I continued to

direct the college's library, also on a half-time basis--a schedule which I do not recommend to anyone. Now you are beginning to understand why I was so pleased to accept my present position in August, 1977.

Each of the other fourteen colleges participating in the project also chose a member of the faculty to serve as a planning officer. Although each college worked by its own priorities, each planning officer received considerable help through in-service training programs and consultants.

A number of management products developed out of the fifteen colleges during this multiple-year grant. Most notable, and the one we will discuss today, was the implementation of a comprehensive analytic planning model on most of those campuses. I will more carefully define analytic planning models in a minute or so. There was a considerable variation from campus to campus, but most models were based to some extent upon *A College Planning Cycle* developed by the accounting firm of Peat, Marwick, Mitchell and Co.[1]

These analytic planning models have some similarities to the MRAP (Library Management Review and Analysis Program) model developed by the accounting firm of Booze, Allen and Hamilton, Inc. for the Association of Research Libraries. Both models are process-oriented and both are highly analytic. The significant differences are that MRAP does not directly result in a budget as its product. Secondly, MRAP is a tool which usually is implemented for only one year. However, most analytic planning models for colleges do result in a budget and are in continuous operation from year to year. MRAP is a snapshot whereas the other is a moving picture. Finally, MRAP is designed for libraries, of course; and what I am discussing here are institutional planning models within which an academic library operates.

The importance of an analytic planning model for an academic library is that the model specifically provides a channel for the library to define and communicate its needs to the institutional planning and budgeting cycle. I'll repeat

this previous sentence. The importance of an analytic planning model for an academic library is that the model specifically provides a channel for the library to define and communicate its needs to the institutional planning and budgeting cycle. I'll be more specific now to help you visualize an analytic planning model.

The following characteristics are common in many analytic planning models:

1. A specific planning structure is written and agreed upon. This will contain statements of responsibilities (and thus, authority); a timetable of activities (often expressed in a PERT chart); and a flow chart of communications, recommendations, and decisions.

2. The college's mission and goals are reviewed.

3. A series of environmental assumptions are agreed upon each year. These form the parameters or outside limits for all planning activities. Examples of environmental assumptions for a college might be:

   a. Our total institution budget for 1980-81 will not exceed $8,800,000. The budget deficit will be no more than $88,000 (1%).

   b. Salary increases will average 7%.

   c. Our student enrollment will not increase over the next five years. The pool from which we recruit will diminish by 3% per year.

   d. Tuition and fees can be increased no more than 5% per year which will be less than the national rate of inflation.

   e. Inflation will be approximately 11% per year. Utility costs will increase at about 18% per year.

   f. No new buildings will be built.

   g. Etc., etc.

4. A resource allocation group composed of faculty, staff, and sometimes the business manager is formed. This group examines program budget requests from each campus department in light of evidence supplied and in view of the environmental assumptions. Priorities among programs (including the library) are recommended. (Note: it is critically important that supporting data be supplied for each program request. We will speak a little later about sources for this data.)

5. A procedure is specified for a series of iterations between the resource allocation group and the administration. The curriculum is usually the prerogative of the faculty. The college budget is normally subject to the authority of the president. Thus, the need for iteration so as to assure a coordination between program priorities and budget capabilities.

6. Most analytic planning systems produce a budget for one year and a tentative budget for the next year or two as the final product.

7. A list of additional recommendations are prepared by the resource allocation group. These recommendations may include administrative reorganization, combining academic departments, closing a dorm, moving the student snack bar to another building, etc. (MRAP also generates a series of recommendations.)

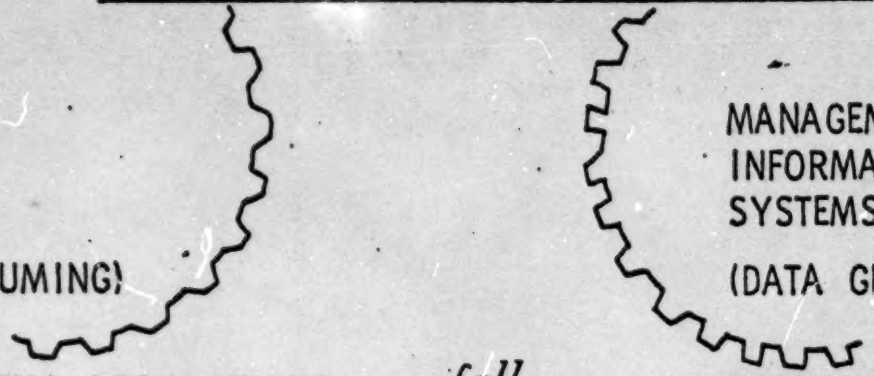
Colleges often find themselves in either of two dilemmas. In the first instance the administrators have all sorts of institutional data (including annual reports and HEGIS forms prepared by the library director) but don't know how to use the data for planning and budgeting. In the second case, they are in the process of planning and developing budgets, but lack the data necessary to guide their thinking. This is the position we are in at the moment with the analytic planning models we have been discussing. We are all set to plan, but lack the proper information to guide our judgements.

Table 1 (on page 50) shows two large gears, each representing one of these dilemmas. When properly meshed, the gears turn together and form a dynamic system rather than a static dilemma. Our discussion has now developed one such gear. It symbolizes an annual planning cycle that is a series of decision points about programs, budgets, resource allocation, etc.

We now turn our discussion to the development of a second gear which symbolizes a series of management information systems which provide the data necessary to drive the planning gear. Both have a speed of one revolution per year and their meshing must be synchronized.

In 1975 the Carnegie Corporation provided a $369,000 grant to the Council for the Advancement of Small Colleges (CASC), to develop and test a series of about a dozen management information systems. These would provide data to drive an analytic planning cycle as well as provide other planning and data services. Specifi-

COORDINATION OF PLANNING AND DATA SYSTEMS



ANALYTIC PLANNING CYCLE (DATA CONSUMING)		MANAGEMENT INFORMATION SYSTEMS (DATA GENERATING)
ENVIRONMENTAL ASSUMPTIONS	—*fall*—	ECONOMIC DATA INSTITUTIONAL RESEARCH DATA
ENROLLMENT PROJECTION	—*fall*—	ADMISSIONS DATA RETENTION DATA
ANTICIPATED REVENUES	—*fall*—	DEVELOPMENT OFFICE DATA BUSINESS OFFICE DATA
PROGRAM PLANS	-*winter*-	LIBRARY DATA ACADEMIC DEPARTMENT DATA STUDENT SERVICES DATA ETC., ETC.
REVISE ALL OF ABOVE	-*Feb.* —	SAME DATA SOURCES
PREPARATION OF BUDGET	-*March*-	SUMMARY OF ABOVE DATA
REVISION OF BUDGET	—*May*—	ECONOMIC DATA INSTITUTIONAL RES. DATA
APPROVAL OF BUDGET	—*May*—	

cally, the objectives of this Carnegie Corporation-funded National Research and Management Project were:

1. The development of procedures for the collection, display, and use of data for institutional analysis and planning.

2. The development of instruments and definitions which satisfy the first objective but which would also assure comparability of data among institutions.

3. The development of instruments that will assist in the compilation of data in a format suitable to have a bearing on state and national policy formation.

Our discussion here will be limited to the first two objectives. Nine management modules have now been developed and tested as a part of the National Research and Management Project:

Library Costs and Services

Personnel and Compensation

Instructional Program

Faculty Activity

College Goals and Climate

Student Recruitment

Student Attrition

Student Financial Aid

Fund Raising

These nine data modules are available from CASC individually or in combination on a fee basis as data services to interested colleges. It is not anticipated that any college will choose to participate in all nine modules. The greatest advantage, however, is often realized when a college utilizes several related modules. A data base of anywhere from 30-60 colleges exist for most modules at the time of this writing (summer, 1979).

A brief word about the Library Costs and Services module of the National Research and Management Project might be appropriate here.

Basically it utilizes some carefully selected library data you provide from your HEGIS reports. This data is supplemented by a small amount of additional information about the amount of professional and clerical personnel in your library.

Each library then receives three data services: 1. reports which display the raw data for your college beside the data for other similar size, but unidentified, colleges; 2. a second series of reports which analyze your raw data and display the analyses beside the analyses of those other colleges; and 3. a user's manual.

The analyses include:

1. The distribution of library expenditures across:
   a. Library personnel
   b. Library materials
   c. General expenditures
2. The distribution of library personnel by classification (clerical or professional) for each library function (administration, technical services, public services).
3. The distribution of library material expenditures among:
   a. Books
   b. Periodical subscriptions
   c. Binding
   d. Microfilms
   e. A-V
   f. Other
4. Levels of institutional support for the library:
   a. Library expenditures as a percent of the education and general expenditures
   b. Library expenditures as a percent of the instructional expenditures (this is a much more useful measure than the traditional education and general measure)

c. Library expenditures per full time equivalent (f.t.e.) students

d. The ratio of professional librarians to total faculty

e. The ratio of professional librarians to f.t.e. students

5. Other analytic measures are given for the library collection and the use made of it.

I once had to interpret the data for my library to an accreditation examiner six months after coming to that college. It was nearly impossible for me to evaluate my data since I had no empirical context in which to place it! I was asked, among other things, if my library collection were adequate. I might as well have been asked how long is long? You can't answer either question if you don't have a context in which to frame your response. This series of data modules or management information systems is designed to interrelate in such a way that one module helps provide a context within which to evaluate the data from other modules.

The matrix in Table 2 (on page 54) shows the interrelated nature of these various modules. I have used an X to indicate the cells which represent closely related modules. A ✓ indicates cells with a more limited, but still important, relationship.

A college might have a high emphasis on "academic processes" and "intellectual processes," two measures found in the College Goals and Climate module. When this college examines its library through the Library Costs and Services module, it would expect to find its library to be appropriately well supported and actively used in comparison with the norms of other institutions participating in these studies. The data suggesting that this library does or does not meet these expectations are valuable cogs in the data wheel discussed earlier. This is particularly so because these are analytic data stated in the context of the institution's evident goals and climate.

TABLE 2

INTERRELATIONSHIP OF MODULES

	Library Costs & Services	Personnel & Comp.	Instruc-tional Program	Faculty Activity	College Goals	Recruit-ment	Student Attrition	Finan-cial Aid	Fund Raising
ibrary	—	X	X	X	X				
ersonnel & Comp.	X	—	X	X	X	X	X	X	X
nstruct. rogram	X	X	—	X	X				
aculty ctivity	X	X	X	—	X		X		
ollege oals	X	X	X	X	—	X	X	✓	X
ecruitment		X			X	—	X	X	
tudent ttrition		X		X	X	X	—	X	✓
inancial id		X			✓	X	X	—	X
und aising		X			X		✓	X	—

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A relationship should also exist between the library and the personnel and salary profile for a college. Approximately 60% of a library's expenditures are for personnel.[2] Thus, it might be helpful for a librarian to examine staffing in the context of the institution's total personnel and salary programs. For example, a librarian may discover from use of the Library Costs and Services module that her/his library is somewhat more highly staffed than the norm for colleges of that size. This information has limited utility in planning but its usefulness would certainly be enhanced if it were placed in a more specific context.

Thus, if the librarian knew from the Personnel and Compensation module data that her/his college as a whole spent more than the norm for personnel, then she/he knows that this supposed aberration from the norm is consistent with other departments in the college and is defensible! Rather than having to defend this "aberration," one would be able to capitalize upon it in planning.

The library is also functionally related to instructional costs. A college should be able to validate its assumptions about the adequacy of its support of the library through use of the Instructional Program module (which measures instructional costs). Should a college be satisfied with a relatively low level of support for the library if it has instructional costs which indicate a high level of support for other academic departments? The question of library budgets, when couched in this analytic framework, and based upon analytic data, easily can be addressed through the college's planning process.

Even data regarding library productivity (not to be confused with effectiveness) can be observed in the context of the Faculty Activity module of the project.

In sum, the research and development phase of this Carnegie Corporation-supported National Research and Management Project has generated a series of nine data-oriented modules or data systems. Each system has the capability of providing inter-institutional data for comparative purposes. Each system also relates to

several other systems so as to provide an intra-institutional framework for the interpretation of data. Finally, a college could continue to collect and examine its data over a period of several years and thus have a third framework for evaluating its data--a longitudinal framework.

Each of these three frameworks (inter-institutional, intra-institutional, and longitudinal) provide data which are appropriate for planning. Planning requires analytic data and, conversely, no data can be used to best effect without a planning system into which it can be placed.

Thus, we have viewed part of the ecology of an academic library. Not only is this a complex system, but the system exists in an environment insecure for higher education.

We are far from perfecting our planning and data-gathering tools, but in the land of the blind, the one-eyed person is king (or queen).

FOOTNOTES

1. National Association of College and University Business Officers, *A College Planning Cycle; People, Resources, Process; a Practical Guide* (Washington: National Association of College and University Business Officers, 1975).

2. Data gathered from this author's own research under the Carnegie Corporation grant described herein.